

Claim 1-113 (Canceled)

114. (New) An implantable device that has a compressed undeployed diameter and an expanded deployed diameter, the device comprising:

a radially expandable stent comprising a generally cylindrical wall surface and having a hollow bore extending longitudinally therethrough, wherein the generally cylindrical wall surface comprises a plurality of lateral openings in the wall surface;

a tubular inner base graft formed of expanded, sintered PTFE, wherein said tubular inner base graft is deployed within the hollow bore of the stent such that the outer surface of the tubular inner base graft is in contact with the inner surface of the stent; and

a tubular outer layer comprising expanded, sintered PTFE tape wound about the outer surface of said stent,

wherein the longitudinal length of said device remains substantially constant when the device is expanded from the undeployed diameter to the deployed diameter.

115. (New) The device of claim 114, wherein the stent comprises a plurality of undulating elements that comprise a spiral with a plurality of turns.

116. (New) The device of claim 115, wherein the adjacent turns of the spiral are connected to each other by at least one linear connector.

117. (New) The device of claim 115, wherein the undulating elements are zigzag elements.

118. (New) The device of claim 115, wherein the undulating elements are sinusoidal elements.

119. (New) The device of claim 114, wherein the tape has a thickness of less than about 0.015 inches (0.038 cm).

120. (New) The device of claim 119, wherein said tape is wound around the stent in 1 to 10 overlapping layers.



121. (New) The device of claim 114, wherein the stent comprises a self-expanding stent.

122. (New) The device of claim 121, wherein the self-expanding stent comprises a shape memory alloy.

123. (New) The device of claim 114, wherein the stent comprises a balloon expandable stent.

124. (New) The device of claim 114 further comprising:

PTFE particles deposited between the tubular inner base graft and the tubular outer layer.

125. (New) The device of claim 124, wherein a bond is formed between the tubular inner base graft and the tubular outer layer by heating said device.

126. (New) An implantable device that has a compressed undeployed diameter and an expanded deployed diameter, the device comprising:

a radially expandable stent comprising a generally cylindrical wall surface and having a hollow bore extending longitudinally therethrough, wherein the generally cylindrical wall surface comprises a plurality of lateral openings in the wall surface;

a tubular inner base graft formed of expanded, sintered PTFE, wherein said tubular inner base graft is deployed within the hollow bore of the stent such that the outer surface of the tubular inner base graft is in contact with the inner surface of the stent; and

a tubular outer layer comprising expanded, sintered PTFE tape wound about the outer surface of said stent,

wherein the device has a substantially uniform diameter along its longitudinal length when the device is expanded from the undeployed diameter to the deployed diameter.

127. (New) The device of claim 126, wherein the stent comprises a plurality of undulating elements that comprise a spiral with a plurality of turns.



128. (New) The device of claim 127, wherein the adjacent turns of the spiral are connected to each other by at least one linear connector.

129. (New) The device of claim 127, wherein the undulating elements are zigzag elements.

130. (New) The device of claim 127, wherein the undulating elements are sinusoidal elements.

131. (New) The device of claim 126, wherein the tape has a thickness of less than about 0.015 inches (0.038 cm).

132. (New) The device of claim 131, wherein said tape is wound around the stent in 1 to 10 overlapping layers.

133. (New) The device of claim 126, wherein the stent comprises a self-expanding stent.

134. (New) The device of claim 133, wherein the self-expanding stent comprises a shape memory alloy.

135. (New) The device of claim 126, wherein the stent comprises a balloon expandable stent.

136. (New) The device of claim 126 further comprising:

PTFE particles deposited between the tubular inner base graft and the tubular outer layer.

137. (New) The device of claim 136, wherein a bond is formed between the tubular inner base graft and the tubular outer layer by heating said device.

---